

2015 WATER QUALITY REPORT

CONSUMER CONFIDENCE REPORT



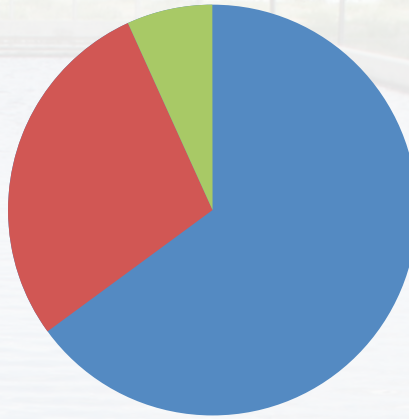
CITY OF MIDLAND, TEXAS
UTILITIES DEPARTMENT

WHERE DO WE GET OUR DRINKING WATER?

Midland's drinking water comes from the Ogallala and Trans-Pecos Plateau aquifers in Martin, Andrews, Loving and Winkler Counties. Also, surface water sources owned and operated by the Colorado River Municipal Water District (CRMWD); lakes J.B. Thomas, O.H. Ivie, and E.V. Spence.

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at tceq.texas.gov/gis/swaview.

Further details about sources and source water assessments are available in Drinking Water Watch at dww2.tceq.texas.gov/DWW/.



2015 WATER USE:

- CRMWD
- T-Bar
- Paul Davis

As required by state law, this notice is to inform you that the City of Midland water system is experiencing a water loss of 9.7 percent. Reasons for water loss include but are not limited to evaporation, system leaks, and meter accuracy.

OUTDOOR WATERING

The current outdoor watering schedule allows residents and businesses in the City of Midland to water twice per week.

- *Even numbered addresses may water outdoors on Saturdays and Wednesdays.*
- *Odd numbered addresses may water outdoors on Fridays and Tuesdays.*

Learn more about our current watering restrictions at midlandtexas.gov/outdoorwatering.

HOW MUCH IS A DROP? UNDERSTANDING CONCENTRATION LEVELS:

Here are some parts per million and parts per billion examples from the real world:

Parts per million:

1 cent in \$10,000 = 1 ppm
1 minute in 2 years = 1 ppm
1 inch in 16 miles = 1ppm

Parts per billion:

1 cent in \$10,000,000 = 1 ppb
1 minute in 32 years = 1 ppb
1 inch in 16,000 miles = 1ppb

PUBLIC PARTICIPATION OPPORTUNITIES

The Midland City Council meets on the 2nd and 4th Tuesdays of each month at City Hall, 300 N. Loraine Street, at 10:00 a.m. The Council agenda is posted for public notice at least 72 hours prior to the meetings. To find out whether water issues will be considered at a particular City Council meeting, please call the Utilities Department at 432-685-7260.

ABOUT THE FOLLOWING PAGES

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants. For a complete list of all contaminants tested and the analytical results, go to dww2.tceq.texas.gov/DWW/.

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

For more information regarding this report, contact Assistant Utilities Director Carl Craig, PE at 432-685-7260.

SPECIAL NOTICE

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at epa.gov/safewater/lead.

SECONDARY CONSTITUENTS

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

EN ESPAÑOL

Este reporte incluye información importante sobre el agua potable. Si tiene preguntas o discusiones sobre éste reporte en español, favor de llamar al tel. 432-685-7260 para hablar con una persona bilingue en español.

SOURCE OF DRINKING WATER

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminates that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

ARSENIC

The maximum contaminant level (MCL) for arsenic decreased from 0.05 mg/l (50ppb) to 0.010 mg/l (10ppb) effective January 23, 2006. If we violate the rule, you will be notified. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

2015 REGULATED CONTAMINANTS DETECTED

Definitions: Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sample	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation
Copper	7/21/2012	1.3	1.3	0.342	0	ppm	N
Lead	7/21/2012	0	15	4.32	2	ppb	N

Likely Source of Contamination:

COPPER: Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

LEAD: Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation
Haloacetic Acids (HAA5)	2015	21	0 - 28.3	No goal for the total	60	ppb	N
Total Trihalomethanes (TTHM)	2015	74	0 - 75.5	No goal for the total	80	ppb	Y

Likely Source of Contamination:

Haloacetic Acids (HAA5): By-product of drinking water disinfection.

Total Trihalomethanes (TTHM): By-product of drinking water disinfection.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation
Antimony	2015	0.44	0.44 - 0.44	6	6	ppb	N
Arsenic	2015	28	4.8 - 30	0	10	ppb	N*
Barium	2015	0.14	0.14 - 0.14	2	2	ppm	N
Chromium	2015	1.1	1.1 - 1.1	100	100	ppb	N
Fluoride	2015	4.3	0.816 - 4.26	4	4	ppm	N
Nitrate [measured as Nitrogen]	2015	3	0.616 - 2.82	10	10	ppm	N
Selenium	2015	60	9 - 55.3	50	50	ppb	N*

Likely Source of Contamination:

Antimony: Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.

Arsenic: Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

Barium: Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Chromium: Discharge from steel and pulp mills; Erosion of natural deposits.

Fluoride: Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

Nitrate [measured as Nitrogen]: Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Selenium: Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

*Values Higher than the MCL for Arsenic and Selenium were recorded at the Paul Davis plant, this water source is less than 10% of the City's water use and is blended at the treatment plant to lower the values below the MCL which results in not being in violation.

2015 REGULATED CONTAMINANTS DETECTED

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation
Beta/photon emitters	2/6/2013	19	19 - 19	0	50	pCi/L*	N
Gross alpha excluding radon and uranium	2/6/2013	12.2	12.2 - 12.2	0	15	pCi/L	N

Likely Source of Contamination:

Radioactive Contaminants: Decay of natural and man-made deposits.

Gross alpha excluding radon and uranium: Erosion of natural deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation
Di (2-ethylhexyl) phthalate	2015	0.5	0 - 0.5	0	6	ppb	N

Likely Source of Contamination:

Di (2-ethylhexyl) phthalate: Discharge from rubber and chemical factories.

Turbidity	Limit (Treatment Technique)	Level Detected	Violation
Highest single measurement	1 NTU	0.4 NTU	N
Lowest monthly % meeting limit	0.3 NTU	99%	N

Likely Source of Contamination:

Turbidity: Soil runoff. **Information Statement:** Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration

Total Organic Carbon:

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Total Trihalomethanes (TTHM):

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
Public Notice Rule Linked To Violation	11/16/2011	2015	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

Public Notification Rule:

The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency)

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	1/1/2015	3/31/2015	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	4/1/2015	6/30/2015	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

2015 REGULATED CONTAMINANTS DETECTED

Coliform Bacteria:

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest no. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation
0	5% of monthly samples are positive.	0.7% of samples were positive	A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive.	0	N

Likely Source of Contamination:

Coliform Bacteria: Naturally present in the environment

2015 DISINFECTANT LEVELS

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	UMRDLG	Unit of Measure
2015	Chloramines	2.87	0.0	8.0	4.0	<4.0	ppm

Source of Chemical:

Chloramines: Disinfectant used to control microbes.

DEFINITIONS AND ABBREVIATIONS

Maximum Contaminant Level (MCL)

The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Avg

Regulatory compliance with some MCLs are based on running annual average of Monthly samples

NTU

Nephelometric Turbidity Units

MFL

million fibers per liter (a measure of asbestos)

pCi/L

picocuries per liter (a measure of radioactivity)

ppm

parts per million, milligrams per liter (mg/l), or one ounce in 7,350 gallons of water

ppb

parts per billion, micrograms per liter (µg/l), or one ounce in 7,350,000 gallons of water

ppt

parts per trillion, nanograms per liter, or one ounce in 7,350,000,000 gallons of water

na

not applicable

RESIDENT RESOURCES

BACKFLOW PREVENTION

The City's plumbing code requires a backflow preventer on all landscape irrigation systems, swimming pools, and hot tubs.

The backflow preventer is a device that prevents impurities or contaminants from being drawn into the drinking water system. Many sprinkling systems already have the proper backflow preventer installed and need only be tested annually. Others may not meet state and local regulations and may need to be replaced with the proper backflow preventer.

State certified backflow technicians, available through your turf irrigation company or plumber can determine whether or not your equipment meets the requirements. The regulations also require a state certified backflow technician test the backflow preventer annually.

Find a tester at midlandtexas.gov/backflow.

WHAT IS BACKFLOW?

Backflow is the undesirable reversal of flow in a potable water distribution system. Water that is always under pressure can only flow in one direction. Then how can water flow in reverse? Water will always flow toward the point of lowest pressure. If a water main were to break or if the fire department opened several fire hydrants to help fight a fire, the pressure in the water main could drop. The demand upstream could cause a reversal in flow.

A garden hose submerged in a hot tub, swimming pool, car radiator or attached to an insect/fertilizer sprayer could siphon the liquid back into the water main. Water from an irrigation system could be siphoned back into the public water supply.

Backflow prevention assemblies are designed to protect the public water system from these types of concerns.

Learn more at midlandtexas.gov/backflow.

WATER-SMART LANDSCAPING

Did you know that residential outdoor water use across the United States accounts for nearly 9 billion gallons of water each day, mainly for landscape irrigation? The average U.S. household uses more water outdoors than most American homes use for showering and washing clothes combined.

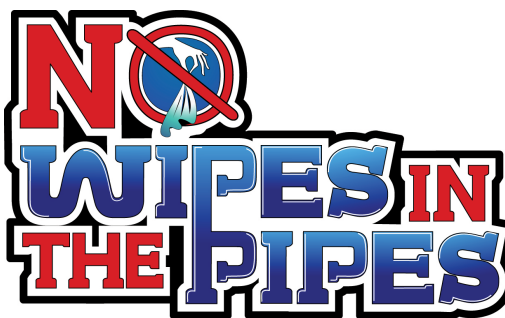
By following some simple steps, you can have a water-smart landscape that's beautiful, healthy, and easy to maintain. Learn more at epa.gov/watersense/outdoor.



NO GREASE DOWN THE DRAIN

Help avoid unwanted spills and overflows:

- Never pour oil through the sink drainage or through the toilet.
- Scrape the grease from food leftovers and place it in a can or in the trash for disposal.
- Place filters or strainers on the sink drain to trap leftover food and other solids, and discard contents into the trash.
- Speak to your friends and neighbors about how they can prevent grease from entering the storm water system.



 **Only toilet paper down the toilet**

DON'T CLOG THE PIPES!

Flushing non-flushables causes millions of dollars in damages every year.

Many disposable wipes claim to be "flushable" but do not break down as they travel through pipes into the sewer system. These wipes can create clogs in both household plumbing and the city's sewer system and result in costly sewer backups.

Other products that cause problems and shouldn't be flushed are: disposable diapers, rags and towels, feminine care products, paper towels, cotton balls/swabs, facial tissue, and kitchen grease.

Please do your part and place these materials where they belong: in the trash. Putting the wrong things down the drain can damage the public sewer system and cause sewer backups in your home.



LEARN MORE AT **MIDLANDTEXAS.GOV**